Lewis River Hydroelectric Projects Settlement Agreement
Aquatic Coordination Committee (ACC)
Meeting Agenda

Date & Time: **Thursday, March 8, 2018**
9:00 a.m. – 11:30 a.m.

Place: **Merwin Hydro Control Center**
105 Merwin Village Court
Ariel, WA 98603

Contacts: **Erik Lesko: (503) 412-8401**

Time	Discussion Item
9:00 a.m.	Welcome ➢ Review Agenda and ACC 2/8/18 Meeting Notes ➢ Comment & Accept Agenda and 2/8/18 Meeting Notes
9:10 a.m.	Public Comment Opportunity
9:20 a.m.	2017/2018 Aquatic Fund Project Review; DECISION MEETING
10:00 a.m.	Merwin Adult Fish Trap Efficiency Study – Decision to tag hatchery spring Chinook in 2018
10:30 a.m.	Eagle Cliff Trail; License Amendment Application
10:45 a.m.	Study/Work Product Updates o H&S Plan Update o Woodland Release Ponds – Status o Acclimation Ponds Decommission - Status o Merwin Upstream Passage – Status o Swift Floating Surface Collector – Status o Lewis River In-Lieu Status
11:15 a.m.	➢ Next Meeting's Agenda ➢ Public Comment Opportunity Note: all meeting notes and the meeting schedule can be located at: http://www.pacificorp.com/es/hydro/hl/lr.html#
11:30 a.m.	**Adjourn**

Join by Phone
+1 (503) 813-5252 [Portland, Ore.]
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Conference ID: 2625672

FINAL Meeting Notes
Lewis River License Implementation
Aquatic Coordination Committee (ACC) Meeting
March 8, 2018
Merwin Hydro Control Center

ACC Representatives Present (14)
Kim McCune, PacifiCorp
Chris Karchesky, PacifiCorp
Erik Lesko, PacifiCorp
Todd Olson, PacifiCorp
Amanda Froberg, Cowlitz PUD
Tom Wadsworth, WDFW
Peggy Miller, WDFW
Aaron Roberts, WDFW
Ruth Tracy, USDA Forest Service
Steve Manlow, LCFRB
Jim Byrne, Trout Unlimited (conference)
Tim Romanski, USFWS
Jim Malinowski, Fish First
Eli Asher, Cowlitz Indian Tribe

Calendar:

April 12, 2018	ACC Meeting	HCC

Assignments from November 9, 2017	**Status**
McCune/Lesko: Schedule a tour of the Woodland Release Ponds for the ACC, when possible.	**Scheduled for May 10, 2018**

Opening, Review of Agenda and Meeting Notes
Erik Lesko (PacifiCorp) called the meeting to order at 9:05 a.m. and reviewed the agenda. Lesko requested one additional topic to review the aquatic fund process protocol specific to defining consensus and project proponents.

Lesko also reviewed the February 8, 2018 meeting notes. The meeting notes were approved without change at 9:05 a.m.

Public Comment
None

Aquatic Fund Process Protocol – Consensus
Lesko read the following detail from the *Aquatic Funds – Strategic Plan and Administrative Procedures, August 2016* document to provide some clarification regarding consensus:

> *"Consensus" for funding of a project is defined per the Lewis River Settlement Agreement definition: ""Consensus" means that all Parties participating in a committee or other decision-making group consent to a decision. Consent does not necessarily imply that a Party agrees completely with a particular decision, just that the Party is willing to go along*

with the decision rather than block the action." If consensus is not achieved at the meeting, additional meetings will be scheduled and conducted as soon as possible.

In addition, Lesko noted that a project proponent cannot champion their own project at a decision-making meeting. The general agreement of the ACC is that a project proponent is defined as the author of the project proposal. A more detailed review of the aquatic funding protocol will be scheduled for a future ACC meeting to include discussion regarding the formation of a subgroup to provide technical review of potential projects and recommendations to the ACC.

2017/2018 Aquatic fund Project Review: DECISION MEETING
The ACC provided Evaluation Ranking Criteria and written comments as more fully detailed in the attached 2017/2018 LR Aquatics Fund Evaluation, March 8, 2018 (**Attachment A**).

Considerable discussion took place regarding the need for post-project monitoring reports, timing of habitat improvement projects, waiting until fish passage efficiency has improved, structural integrity of in-water structures, phased approach not adequately described, and likelihood of project failure/success of the proposed mainstem project. While the CIT, Trout Unlimited and Fish First, did not approve funding the Forest Service Aquatic Fund project, they each stated that they will not stand in the way of this project going forward with funding. Following representative input, there was discussion about modifying the aquatic funding process document in subsequent years to possibly include the following:

- Provide better definition for the term Project Proponent?
- Define when a Project Proponent can or cannot attend a meeting or respond to comments/questions?
- Discuss the possibility of an Aquatic Fund Subgroup to include subject matter experts such as biologists, hydrologists, engineers, etc. representing ACC entities who will review and grade the merits of each aquatic fund habitat improvement project, then make recommendations to the ACC Representatives for final approval.

These questions will be addressed at a future ACC meeting and will be considered for incorporation into the Administrative Procedures document.

The Forest Service agreed to provide the ACC with post-project monitoring reports (a task outlined in the proposal) as a deliverable for the project.

Consensus was reached at today's ACC meeting to proceed with the final Resource Project:

Project No.	Applicant	Project Title	Funding Requested	Decision
1	USDA Forest Service	Lewis River 21 – Phase II	$177,000 (Resource Funds)	YES

To accommodate those ACC participants not in attendance today, the Utilities are providing an additional 7-day comment period. Kim McCune (PacifiCorp) will email the decision to all ACC members for their review as quickly as possible in order to meet the April 15, 2017 FERC filing deadline.

Merwin Adult Fish Trap Efficiency (ATE) Study – Decision to Tag Hatchery Spring Chinook in 2018

During the February 8, 2015 ACC meeting Tom Wadsworth (WDFW) asked whether adult spring Chinook would be tagged in spring 2018 to assess Adult Trap Efficiency (ATE) at Merwin Dam. The question was raised because the projected adult return rate in 2018 was higher than in previous years, and it might be good to take advantage of these fish to evaluate ATE.

Chris Karchesky (PacifiCorp) provided a review of goals of the ATE studies and reviewed past study results. To date, adult spring Chinook have only been evaluated in 2015. During this study, hatchery origin fish captured at the Merwin Trap were radio tagged and released back downstream. Originally, it was planned to tag about 150 fish as part of this 2015 evaluation, however due to low return numbers combined with poor performance of tagged fish, only 40 fish were ultimately tagged that year. Of the 40 hatchery fish that were tagged, nearly all returned to the Merwin Dam tailrace. However, very few returned to the trap and were successfully captured. Instead the majority (>80%) eventually fell back downstream and were never recovered. This behavior was thought to be due in part to using hatchery origin fish combined with fish that had already passed through the collection system before (trap non-naïve). Karchesky indicated to the ACC that if hatchery spring Chinook were evaluated again in 2018, he anticipates similar results would occur. Karchesky felt that these fish would be better used as broodstock or taken upstream to spawn in the upper basin. He also went on to state that good information was currently being collected on winter steelhead to assess the possible effect of trap-naïve fish on passage success. Karchesky suggested that the ACC should wait on the results of this study before continuing to evaluate ATE for spring Chinook and coho salmon. He also added that the use of upper basin fish rather than hatchery origin fish should also be considered in future evaluations.

Peggy Miller (WDFW) asked if postponing the ATE studies would delay future modifications to the trap designed to improve ATE. Karchesky responded that PacifiCorp will continue to make necessary adjustments to the existing facility to improve ATE. He went on to state that the addition of the fyke was a major improvement and that PacifiCorp was working with Ed Meyer (NMFS fish passage engineer) on potentially modifying the entrance of the fish ladder to help fish better transition into the trap. There simply is not enough reliable information to move forward with any major modifications at this time. Additional information on trap-naïve verse trap non-naïve fish needs to be sorted out as well as the use of upper basin fish rather than hatchery origin fish should also be considered.

The ACC decided not to evaluation ATE for spring Chinook in spring 2018, and will postpone this evaluation to a later date.

Merwin Adult Fish Trap Efficiency (ATE) Study – Update on Tag Blank Wire Tagged Winter Steelhead in 2018

Karchesky (PacifiCorp) provided a brief overview of the study intent and indicated that a total of 14 fish had been tagged so far (4 naïve and 10 non-naïve). Of these, three (3) non-naive had already returned to the Merwin Dam tailrace and all had successfully passed. Currently, ATE for winter steelhead in 2018 is 100%.

Eagle Cliff Trail; License Amendment Application
Todd Olson (PacifiCorp) communicated to the ACC attendees that PacifiCorp has been preparing an amendment application to the Lewis River license that would eliminate FERC license Article 406, a provision requiring PacifiCorp to plan and construct the Eagle Cliff Park Trail. Below is a synopsis of the details the ACC, TCC and Settlement Agreement Authorized Representatives can expect to receive March 9, 2018 via email from Kim McCune (PacifiCorp) for a 60-day review and comment period. Comments will be due by close of business May 8, 2018. PacifiCorp is providing both a PDF of the draft Amendment and the following link to the Lewis River website: http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Hydro/Hydro_Licensing/Lewis_River/sad/03092018_Swift_1_Lic_Amend_DRAFT.pdf

In accordance with Article 406 PacifiCorp was to pursue building a trail at Eagle Cliff that connects with a larger trail system.

- PacifiCorp completed a feasibility study that identified three trail alternatives.
- Concerns expressed by the agencies (specifically USFW and WDFW) was that the trail was located by a major bull trout holding area, increased fishing pressure from the public, and disturbance to other wildlife. Consensus was to not build the trail.
- In response to the information, FERC noted PacifiCorp should seek a formal amendment to the License removing this specific license article.
- PacifiCorp has prepared an amendment application and is providing it to parties to the Lewis River Settlement Agreement for review and input. No comment back to PacifiCorp means approval to proceed with application to remove the requirement from the License.

Lewis River In-Lieu Status
Tim Romanski (USFWS) informed the ACC attendees that the Services met with the Cowlitz Indian Tribe and PacifiCorp approximately one month ago. The Services will be seeking meetings with the Cowlitz Indian Tribe and the Yakama Nation towards meeting the August 2018 decision deadline.

Eli Asher (Cowlitz Indian Tribe) asked that Olson identify work that PacifiCorp had taken, most notably with people in Washington DC. Olson shared that PacifiCorp favors a partnership with the National Fish & Wildlife Foundation; it can bring benefits and increase the scope of habitat restoration. Individual meetings at various organization levels have been held with certain agencies and both tribes. ACC representatives would like to hear more about the Foundation and implementation of the full in-lieu fund alternative. This topic was added to the April ACC agenda.

Study/Work Product Updates

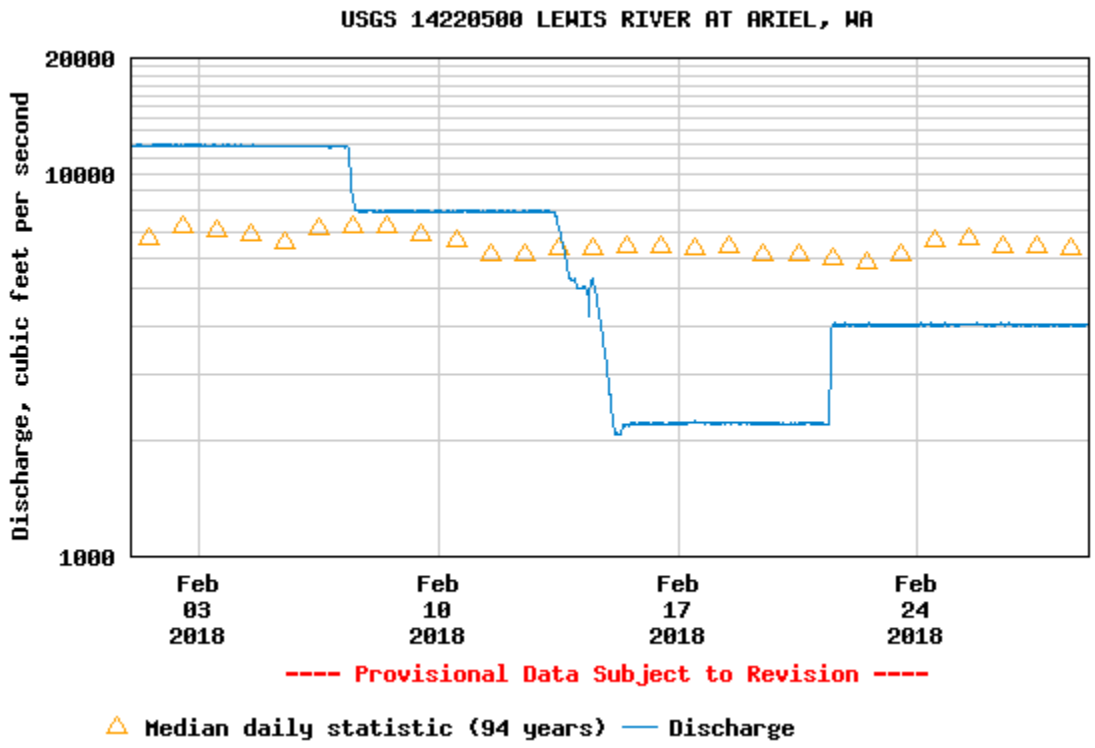
H&S Plan Update
The H&S Subgroup is close to completing a review draft of the Annual Operating Plan (AOP). Once the Subgroup has completed its 30 day review of the draft the Subgroup will provide the plan to the ACC for approval The Subgroup intends to provide the AOP for review by the ACC no later than May 1, 2018. The 2018 AOP has substantial changes from previous versions. Most notably, a comprehensive evaluation to test various rearing strategies for spring Chinook to improve survival.

Woodland Release Ponds
PIT tag antennas are installed. Ponds are designed for volitional exit. The facility is included in region wide PIT Tag Information System (PTAGIS). The ACC agreed that a tour of the Ponds will be conducted May 10, 2018.

Acclimation Ponds Decommission
The permitting process continues; USFS is waiting on a response from NMFS.

Merwin Fish Collection Facility and General Operations (Attachment B)
During the month of February, a total of 358 fish were captured at the Merwin Adult Fish Collection Facility. The majority of these fish were Blank Wire Tag (BWT) winter steelhead (222 – 62%).

The Merwin Dam adult fish trap crowder and conveyance system ran continuously through the month of February except for on February 16, 2018 due to a damaged hoist block on the fish hopper. The damage was repair and fish trap put back in service. The Attraction Water Supply (AWS) and ladder water supply remained in operation during this brief outage. River flow varied below Merwin Dam ranging between 2,210 and 11,900 cfs throughout the month.



Upstream Transport (Attachment B)
Nine Blank Wire Tag (BWT) winter steelhead were transported upstream of Swift Dam in December 2017. Two additional fish were transported earlier in the fall for a total of 11 BWT steelhead collected and transported in fall/winter 2017. Through February 2018, an additional 248 BWT winter steelhead were transported upstream for a total of 259 fish transported as part of the 2018 run year.

Typically, late run wild winter steelhead in the North Fork Lewis River begin arriving at the Merwin trap in January and continue through early-May. By February 16, 2018, more than 180 late-winter steelhead (both BWT and Natural Origin Returns (NORs)) had already arrived at the Merwin Trap. Compared to all previous years, no more than 63 fish had ever arrived back to Merwin Trap by this time. Most of these fish (~80%) so far in 2018 have been BWTs.

YTD: February 16	
Year	**All WWSH (BWT+NOR)**
2013	13
2014	29
2015	63
2016	27
2017	23
2018	186

PacifiCorp began transporting early coho salmon to the upper basin on August 25, 2017. By the end of the December, a total of 6,499 early- and late-coho had been transported and released at the head of Swift Reservoir. An additional 448 late-run coho were transported in January 2018 for a total of 6,947 transported during the 2017 run year. No coho were transported in February.

2017 Coho Salmon (thru January 2018)

Stock	Origin	Male	Female	Jacks	Total
Early (S-type)	Natural	910	1,141	18	2,069
Early (S-type)	Hatchery	765	752	16	1,533
Late (N-type)	Natural	77	92	23	
Late (N-type)	Hatchery	1615	1,532	6	3,153
TOTAL		**3367**	**3517**	**63**	**6,947**

Swift Floating Surface Collector (Attachment B)

During the month of February, 1,707 fish were collected. The largest percentage of the fish were spring Chinook smolts (59%) followed by coho parr and smolt (24%). The FSC ran continuously throughout the month of February, however fish were not processed on February 24, 2018 due to poor road conditions.

Total numbers collected at the Swift FSC during the month of February by operation year.

Species (parr/smolt)	**Feb. 2013**	**Feb.2014**	**Feb.2015**	**Feb.2016**	**Feb.2017**	**Feb.2018**
Coho	100	*NA*	3,368	6,511	151	412
Chinook	34	*NA*	554	1,031	9	1,707
Steelhead	1	*NA*	8	45	1	27

Acclimation Program

Roberts informed the ACC attendees that they have 125,000 spring Chinook eggs and it is suspected that the hatchery should meet the 100,000 acclimation stocking target. Currently fish are scheduled to be released from mid-July through early August 2018 (similar to 2017).

Karchesky (PacifiCorp) noted that PacifiCorp will be putting together an acclimation fish release and evaluation plan for 2018. This plan will review past performance (i.e., "lessons learned") as well as propose a strategy for releasing and evaluating acclimation fish in the upper basin over the next 5 years. A draft plan will be submitted to the ACC in mid-March and will be an agenda topic during the April 2018 meeting.

Agenda items for April 12, 2018

- March 8, 2018 Meeting Notes
- Acclimation Pond Plan – Review & Discussion
- In Lieu Fund Update Presentation
- Study/Work Product Update

Adjourn 11:40am

Next Scheduled Meeting:

April 12, 2018
HCC
9:00 a.m. - 12:00 p.m.

Meeting Handouts & Attachments:

- Meeting Notes from 2/8/18
- Agenda from 3/8/18
- **Attachment A** - 2017/2018 LR Aquatics Fund Evaluation, March 8, 2018
- **Attachment B** - Lewis River Fish Passage Report (February 2018)

	A	B	C	D	F 030820 18 - ACC Lewis River AQ Fund evaluation (2017-2018).xls G	H	I	J	K
1									
2		Project			Cowlitz				
3	Applicant	Title	WDFW	LCFRB	Tribe	Trout Unlimited	Utilities	Fish First	USFWS	Yakama Nation
4	USDA Forest Service	Lewis River 21 Phase II	**Yes - recommend to fund this project.**	**Yes - On the technical front LCFRB still has some lingering questions (no technical robustness) but approve going forward with a robust habitat approach.**	**No - Not satisifed with the Forest Service response to Cowlitz Tribe questions; minimal faith in designs. Not a well groomed phased approach but will not stand in the way of funding.**	**No - Not appropriate at this time; consider adaptive management and reconsider project once the Swift Collector is operating efficiently for full success. Trout Unlimited will not stand in the way of funding this project.**	**Yes - recommend to fund this project.**	**No - Wants better success rates with reintroduction efforts but will not stand in the way of funding.**	**Abstain**	**Abstain**
5	USDA Forest Service	Lewis River 21 Phase II	**Comment 1.** Final proposal should be standalone proposal. Be sure to include all information from pre-proposal that should be considered in the evaluation. **Comment 2**. Aerial photos with the location of the proposed structures along with existing jams should be included in the final proposal. **Comment 3**. Background section: should include info about Lewis River Phase I and any common objectives/relationship to proposed Phase II project **Comment 4.** Where are the existing wood complexes in relation to the four new structures being constructed? What will happen to the existing structures i.e. will they be dismantled then rebuilt?	**1)** Both figures 1 and 2 in the full proposal document show the right bank side channel bed elevation as higher than the current main channel bed elevation. The proposed apex and bank structures would engage with flows in the main channel at elevations much lower that the side channel. Diversion of flow into the side channel would only occur at approximately bankfull (Q1.2) or higher flows. By constraining channel forming flows in the main channel up to bankfull elevation, which is the risk of causing vertical channel incision that could further disconnect side channel habitat? Is excavation proposed to ensure side channels will be activated at less than bankfull flows? If so, this should be shown in the project drawings. It important to engage side channels at flows both above and below bankfull elevations because of the year-round needs of reintroduced species for complex, off-channel rearing and spawning habitat.	The full proposal should encompass all proposed actions, design details, processes, etc. For example, the proponent described proposed actions (e.g., side channel excavation) during the January meeting that were not included in the proposal. It was not clear whether this was an omission or an evolution in approach. Along the same lines, answers provided to individual questions should be incorporated into the full proposal (as well as noted in an attachment). While responses to pre-proposal questions were provided, they did not appear to have been fully integrated into the proposal. For instance, pier scour calculations were provided that indicated maximum probable scour would be approximately 16'. While the conceptual drawings appear to have been updated by changing scour depths, the construction details do not appear to have changed (e.g. individual logs now appear to be approximately 3-7' diameter, and the 13' structure height appears nearly 50% greater than the 16' embedment depth). These would not ordinarily qualify as preliminary designs as described in the narrative. Will the greater structure depths change construction techniques? Materials quantities? Likely outcomes?	Trout Unlimited ('T U) appreciates the opportunity to comment on the U. S. Forest Service's Lewis River 21, Phase II Project. Section 7.5 of the Settlement Agreement discusses the Aquatics Fund. It states, "PacifiCorp and Cowlitz PUD shall establish the Lewis River Aquatics Fund ("Aquatics Fund") to support resource protection measures ("Resource Projects"). Resource Projects may include, without limitation, projects that enhance and improve wetlands, riparian, and riverine habitats; projects that enhance and improve riparian and aquatic species connectivity that may be affected by the continued operation of the Projects; and projects that increase the probability for a successful reintroduction program . . . italics TU," In this case, and at this particular time; TU does not believe that this project increases the probability for successful reintroduction. The applicant has done an excellent job meeting the criteria required for a successful application. Their one omission appears to be the provision for insurance as detailed in Appendix 4, Insurance Requirements, of the full proposal form. Although Section 7.5 does not address a holistic or ecosystem approach to habitat projects, Trout Unlimited believes each project should be considered in light of the total restoration process. When the Aquatics Fund was developed; it was not anticipated that difficulties in removing smolting fish from the reservoir would occur. We believe this is a good project, but as long as the Swift Floating Collector is unable to meet its efficiency goals; this project is unwarranted at this time. Section 7.5 does not require that funds must be spent annually. T U believes conducting this project at a time when the collector is operating efficiently will be a much better use of the funds.	Habitat upstream is needed as Utilities are trucking fish into the upper reservoirs Collection efficiencies is steadily improving.			
6	USDA Forest Service	Lewis River 21 Phase II	**Comment 5**. Keep tasks and task numbers consistent throughout the proposal (page 4 and page 10, etc.). Task 1: NEPA and required permits. Please clarify under Task #1: is the NEPA complete or still in process? Is the field work for NEPA document or the field work for the project that is covered in the NEPA? If it's the NEPA document, what type of information needs to be collected? Also, how does Lewis River Phase 1 decision memo relate to Phase 2? **Comment 6.** Task 3: Project Implementation (Page 5) – For Task #3, it appears the Scope of Work for equipment and labor bids will be written (Is this Project Mgmt in budget?), then the contract administrator will monitor invoices, etc. for the contract (paperwork). $20,000 ($10,000 ACC) has been budgeted for Contract Administration. This seems like a large amount of funding for contract administrator responsibilities. Please clarify the job responsibilities for the contract administrator in the final proposal	**2)** The full proposal form should be a stand-alone document that includes all project information from the proposal as well. **3)** The functional relationship between this project and the completed project downstream is unclear. Are there specific design elements of this project intended to maintain or improve functions of the downstream project? Is addition work needed to maintain target flow paths between the two projects? Are additional phases planned for this project area? If so, please describe how the proposed work relates to overall expected habitat outcomes.	Bank stabilization may not be the most appropriate approach at this location, and the proposal does not adequately describe the rationale for stabilizing the bank. Eroding banks are not necessarily detrimental, especially in undeveloped locations. Additionally, even if stabilization is desirable, the proposed bank stabilization structure may eventually exacerbate erosion without vertical members for stability and more detailed analysis to determine causal factors in the rapid channel erosion. As discussed in the January ACC meeting, the cross sections provided in the full proposal suggest that structure placement may encourage greater scour, rather than floodplain interaction, depending on several factors, one of which is whether pre-excavation occurs in side channel areas. The proponent stated that recreational resources may be impacted by excavation, which suggests that if the project functions as designed (regardless of excavation), recreation resources may be constraining. This should be fully explained. Costs in the budget should be justified, per conversations at the January meeting.	Currently, large numbers of coho, spring Chinook, and steelhead smolts enter the reservoir, and have difficulty finding and entering the downstream smolt collector. The vast majority of smolts residualize, and remain in the reservoir. A large percentage of salmon appear in the angler creel. Gravid landlocked coho and spring Chinook have been observed spawning in reservoir and river tributaries. Two separate runs of successfully reproducing landlocked coho and spring Chinook have developed on their own in the upper basin. With large numbers of introduced smolts in the reservoir, and no credible knowledge of their foraging impact on native reservoir species; TU believes it is not prudent to continue habitat projects to further bolster smolt numbers. Residualized smolts impact juvenile rainbow, cutthroat, whitefish, and suckers. These species are not routinely monitored, so we have no idea of the impact of these foraging smolts. This information is critical to determine competition and carrying capacity within the reservoir. However, ESA listed bull trout are monitored, and data indicate they are declining in both size, and numbers, since reintroduction. Additionally, bull trout juveniles must now contend with triple the numbers of coho in their natal streams. This particular project occurs upstream of Rush Creek; one of the only two documented bull trout spawning streams within the basin. This places foraging salmon in close proximity to YOY and yearling bull trout. We believe that the poor collection ability of the downstream collector is the main bottleneck for successful anadromous reintroduction. Our first priority should be fixing the collection problem. Additional habitat improvement efforts are moot, until smolts can successful be transported from Swift to their way to the ocea We anticipate that collection efficiency will be improved over time. TU would prefer that this project be deferred, and funds saved, until passage efficiency is improved. Once the collector is operating efficiently, TU would be pleased to support this project.				
7	USDA Forest Service	Lewis River 21 Phase II	**Comment 7.** (Page 5 and 6) Methods - If NEPA is not relevant for tipping trees, modify the first paragraph in Methods. Cedar or Douglas fir (less than or equal to 36" DBH) from the immediate riparian area – What is the minimum dbh? Also what would be the impact from removing 10 – 12 trees with up to 36" dbh from the riparian area? Will there be impacts to shade, temperature or canopy cover over the river? I'm assuming this is the riparian area of Reach 21, if not identify the location of the "immediate riparian area" and any impacts. I'd like to understand the tradeoff between removing trees and improving LWD in Reach 21. RAT report (Page 2) states wood from the adjacent riparian stands would be greater than 36" dbh and later on page 11 up to 36" dbh. The proposal is less than or equal to 36" dbh. Is it greater than or less than? Provide a note in the proposal identifying the discrepancy in the RAT report and confirming the intended size range. **Comment 8.** Figure 1 (Page 6) – What is the cfs for 2017 base flow?			We believe that the poor collection ability of the downstream collector is the main bottleneck for successful anadromous reintroduction. Our first priority should be fixing the collection problem. Additional habitat improvement efforts are moot, until smolts can successful be transported from Swift to their way to the ocea We anticipate that collection efficiency will be improved over time. TU would prefer that this project be deferred, and funds saved, until passage efficiency is improved. Once the collector is operating efficiently, TU would be pleased to support this project. Currently, large numbers of coho, spring Chinook, and steelhead smolts enter the reservoir, and have difficulty finding and entering the downstream smolt collector. The vast majority of smolts residualize, and remain in the reservoir. A large percentage of salmon appear in the angler creel. Gravid landlocked coho and spring Chinook have been observed spawning in reservoir and river tributaries. Two separate runs of successfully reproducing landlocked coho and spring Chinook have developed on their own in the upper basin. With large numbers of introduced smolts in the reservoir, and no credible knowledge of their foraging impact on native reservoir species; TU believes it is not prudent to continue habitat projects to further bolster smolt numbers. Residualized smolts impact juvenile rainbow, cutthroat, whitefish, and suckers. These species are not routinely monitored, so we have no idea of the impact of these foraging smolts. This information is critical to determine competition and carrying capacity within the reservoir. However, ESA listed bull trout are monitored, and data indicate they are declining in both size, and numbers, since reintroduction. Additionally, bull trout juveniles must now contend with triple the numbers of coho in their natal streams. This particular project occurs upstream of Rush Creek; one of the only two documented bull trout spawning streams within the basin. This places foraging salmon in close proximity to YOY and yearling bull trout.				
8	USDA Forest Service	Lewis River 21 Phase II	**Comment 9**. 8. Specific Work Products (Page 10) - A deliverable is usually a product that would be submitted to the ACC. Using that definition, a contract submission or a tree harvest are not likely deliverables. Clarify if Task 1 identifies the final date the contract can be submitted to the USFS contracting department in order to maintain the proposed timeline. **Comment 10**. 9. Project Duration (Page 10) - Project duration is identified as September 2018 through December 2021 yet NEPA will be complete by March 2018. NEPA is listed as a project task and $5,000 budgeted from ACC funds so it should also be included in the project duration.							
9	USDA Forest Service	Lewis River 21 Phase II	**Comment 11**. Budget (Page 12) - What is the difference between Mt St. Helens Institute and Mt. St.Helens Institute Community Education? What task element is considered Project Mgmt in budget? **Comment 12.** Budget (Page 12) - The intent of the Aquatic Fund is to pay for on the ground work. As such, community education and similar activities may not be appropriate activities for the Aquatic fund. **Comment 13**. Budget (Page 12-13) – add explanation either in table captions or in the body of the document to describe the difference between Tables 2 and 3. If possible combine the two tables into one – may be able to eliminate most of Table 3.							
10	USDA Forest Service	Lewis River 21 Phase II	**Comment 14**. Appendix B (Page 17) – Please address pre-proposal, presentation and written final questions in the final full proposal text not just in an Appendix. Some questions are repeated because some of the information is only in Appendix B. **Comment 15.** Appendix B (Page 17) – The answer to WDFW question #1 did not address the intent of the question and did not address reach potential. Please address within the proposal why we should fund a reach designated as having low potential for increasing spring Chinook productivity when there are restoration needs in other reaches that are listed as having high potential for spring Chinook productivity. The following excerpts from the 2014 Lower Columbia Fish Recovery Board Reach Tier Designations define reach potential: Species Reach Potential (SRP) is the "…contribution of a reach to the current and potential population performance…" It identifies "…reaches where recovery actions…" such as habitat restoration to address limiting factors "…would have the greatest benefit for a particular population." Give justification for restoration in Reach 21 base on reach and recovery potential productivity not just limiting factors. Each reach has limiting factors that affect life history stages. The difference is the overall benefit to population productivity from restoration within a reach. Restoration within a reach that has low reach potential will have less benefit to the population productivity than restoration in a reach with high reach potential.							
11	USDA Forest Service	Lewis River 21 Phase II	3/6/18- I attached WDFW's eval criteria score sheet. I was not sure how to incorporate additional comments from WDFW so I included those in this email: - Authors did not respond to all WDFW comments in the proposal but appears only half of the comments were sent to USFS - Proposal appears to be missing Appendix C - Project manager should consider escape routes in excavated areas in the final design to ensure fish are not entrapped - We would request that the project manager provide the ACC the three post construction monitoring reports - Consider a plan for monitoring fish presence and ideally abundance in and around the restoration site before and after project completion. Could work with the RATS team or with PacifiCorp's existing methodologies for assessing improvements in rearing upriver (Swift Collector, smolt traps, etc.) - ACC may want to see the final design before implementation since final design is not finished.							

Lewis River Fish Passage Report

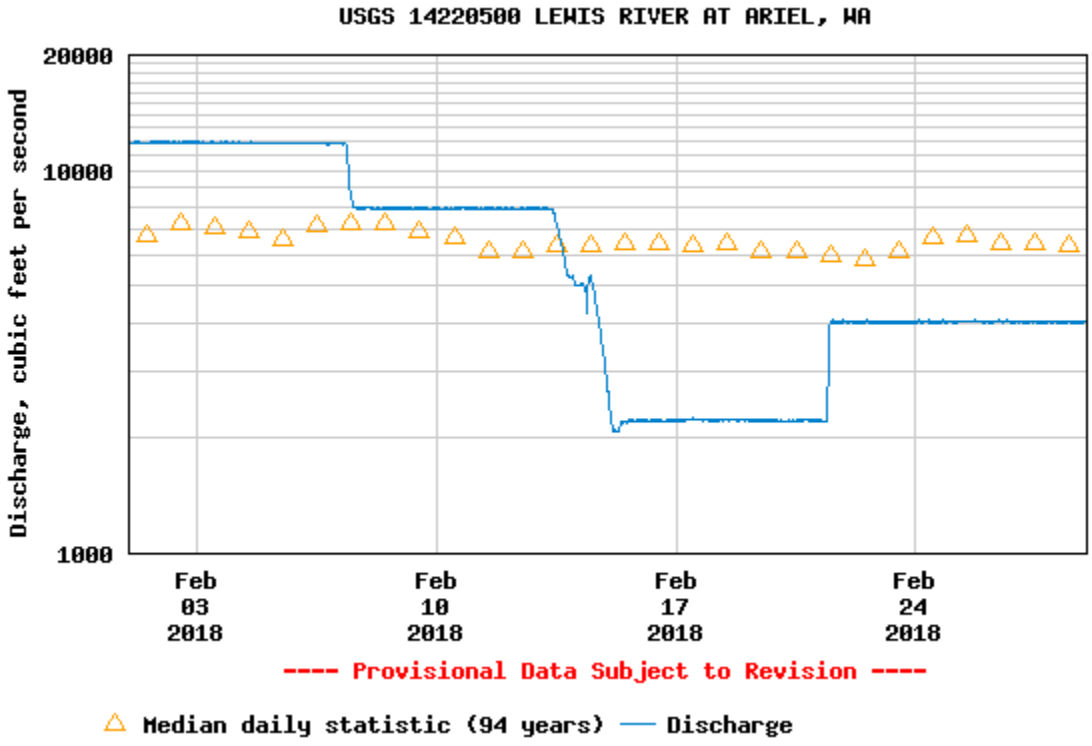
February 2018

Merwin Fish Collection Facility and General Operations

During the month of February, a total of 358 fish were captured at the Merwin Adult Fish Collection Facility. The majority of these fish were Blank Wire Tag (BWT) winter steelhead (222 – 62%).

The Merwin Dam adult fish trap crowder and conveyance system ran continuously through the month of February except for on February 16, 2018 due to a damaged hoist block on the fish hopper. The damage was repair and fish trap put back in service. The Attraction Water Supply (AWS) and ladder water supply remained on during this brief outage. River flow varied below Merwin Dam ranging between 2,210 and 11,900 cfs throughout the month.

Discharge, cubic feet per second



Upstream Transport

Nine Blank Wire Tag (BWT) winter steelhead were transported upstream above Swift Dam in December 2017. Two additional fish were transported earlier this fall for a total of 11 BWT steelhead collected and transported in fall/winter 2017. Through February 2018, an additional 248 BWT winter steelhead were transported upstream for a total of 259 fish transported as part of the 2018 run year.

Typically, late run wild winter steelhead in the North Fork Lewis River begin arriving at the trap in January and continue through early-May. By February 16, 2018, more than 180 late-winter steelhead (both BWT and NOR) had already arrived at the Merwin Trap. Compared to all previous years, no more than 63 fish had ever arrived back to Merwin Trap by this time. Most of these fish (~80%) so far in 2018 have been BWTs.

YTD: February 16	
Year	**All WWSH (BWT+NOR)**
2013	13
2014	29
2015	63
2016	27
2017	23
2018	186

PacifiCorp began transporting early coho salmon to the upper basin on August 25, 2017. By the end of the December, a total of 6,499 early- and late-coho had been transported and released at the head of Swift Reservoir. An additional 448 late-run coho were transported in January 2018 for a total of 6,947 transported during the 2017 run year. No coho were transported in February.

2017 Coho Salmon (thru January 2018)

Stock	Origin	Male	Female	Jacks	Total
Early (S-type)	Natural	910	1,141	18	2,069
Early (S-type)	Hatchery	765	752	16	1,533
Late (N-type)	Natural	77	92	23	
Late (N-type)	Hatchery	1615	1,532	6	3,153
TOTAL		**3367**	**3517**	**63**	**6,947**

Floating Surface Collector (FSC)

During the month of February, 1,707 fish were collected. The largest percentage of the fish were coho parr and smolt (24%) and spring Chinook smolt (59%). The FSC ran continuously throughout the month of February. Fish were not processed on February 24, 2018 due to poor road conditions.

Total numbers collected at the Swift FSC during the month of February by operation year.

Species (parr/smolt)	**Feb. 2013**	**Feb.2014**	**Feb.2015**	**Feb.2016**	**Feb.2017**	**Feb.2018**
Coho	100	*NA*	3,368	6,511	151	412
Chinook	34	*NA*	554	1,031	9	1,707
Steelhead	1	*NA*	8	45	1	27

Fish Facility Report
Merwin Adult Trap
February 2018

Reporting Date	Spring Chinook [1]									Early Coho											
	AD-Clip			Wild			Recap			AD-Clip			CWT			Wild			Recap		
	M	F	JK	M	F	JK	M	F	JK	M	F	JK	M	F	JK	M	F	JK	M	F	JK
01-Feb																					
02-Feb																					
03-Feb																					
04-Feb																					
05-Feb																					
06-Feb																					
07-Feb																					
08-Feb																					
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21-Feb																					
22-Feb																					
23-Feb																					
24-Feb																					
25-Feb		1																			
26-Feb																					
27-Feb																					
28-Feb																					
Monthly	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Reporting Date	Late Coho												S. Steelhead					
	AD-Clip			CWT			Wild			Recap			Fresh		Recap		Wild	
	M	F	JK	M	F	JK	M	F	JK	M	F	JK	M	F	M	F	M	F
01-Feb																		
02-Feb																		
03-Feb																		
04-Feb																		
05-Feb																		
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28-Feb																		
Monthly	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Reporting Date	W. Steelhead								Fall Chinook									Sockeye		Chum		Pink		Cutthroat	Rainbow (< 20 inches)	Bull Trout	Daily Total
	AD-Clip		BWT		Recap		Wild		AD-Clip			Wild			Recap												
	M	F	M	F	M	F	M	F	M	F	JK	M	F	JK	M	F	JK	M	F	M	F	M	F				
01-Feb		2																									2
02-Feb	2	6	2	2			1																				13
03-Feb	2	5	2				1																				10
04-Feb	1	6	3	1			1																				12
05-Feb	2	4	1	1																							8
06-Feb	4	4	2	1																							11
07-Feb	1	1	1	1																							4
08-Feb	8	15	28	12			1	1																			65
09-Feb	2	2	8	2							1																15
10-Feb	1	1	2	1				1																			6
11-Feb	2	5	9	4			1	1																			22
12-Feb	5	6	10	4			1	1																			27
13-Feb	3	1	16	5				1																			26
14-Feb	1	1	8	4			1																				15
15-Feb	2	1	3	1	1			1																			9
16-Feb																											
17-Feb		6	15	3			1	1																			26
18-Feb	2	2	5	1			1																				11
19-Feb		1	8	1																							10
20-Feb		1	2																								3
21-Feb		1	10	2			1																	1			15
22-Feb	1	2	6	3																							12
23-Feb	1	1	4	3				1																			10
24-Feb			5	4																							9
25-Feb			2																								3
26-Feb			5	1																							6
27-Feb			1	1																							2
28-Feb			4	2																							6
Monthly	40	74	162	60	1	0	10	8	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	358
Annual	283	499	200	74	0	0	12	9	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1090

[1] Only hatchery verses wild distinctions are currently being made. All hatchery fish are labeled as "AD-Clip".

[2] Total counts do not include recaptured salmon.

Berkshire Hathaway Energy

Fish Facility Report

Swift Floating Surface Collector

February 2018

	Coho			Chinook			Steelhead				Cutthroat			Bull	Planted	
Day	**fry**	**parr**	**smolt**	**fry**	**parr**	**smolt**	**fry**	**parr**	**smolt**	**kelt**	**fry**	**< 13 in**	**> 13 in**	**Trout**	**Rainbow**	**Total**
01		4	3			12			1			2			3	**25**
02		10	3		1	29						2			4	**49**
03		6	2		1	22			2			1			3	**37**
04		8	3		2	34						4				**51**
05		11	4			33						3				**51**
06		11	6		1	34						3			8	**63**
07		5	9			28			2			4			13	**61**
08		12	4			24			2			6			6	**54**
09		10	2		2	32			1			7		1	10	**65**
10		6	9		2	45			2			3			11	**78**
11		5	4		1	15			3			2			5	**35**
12		9	2		1	19			1			3			1	**36**
13		18	2		1	21			1			1			6	**50**
14		5	1			12			7			1			3	**29**
15		4	3			61						1			7	**76**
16		4	5			43						3			10	**65**
17		11	2			68						5			6	**92**
18		12	9			100						4			22	**147**
19	1	23	8			118			1			10			8	**169**
20	4	25	6		6	58						5			4	**108**
21		4										1			2	**7**
22	4	21	1		4	38						6			8	**82**
23	8	9	3		5	40			1			4			4	**74**
24																
25		48	4		2	38						6			9	**107**
26		21	2		2	18			2			1			5	**51**
27		7	1			6									1	**15**
28		5			3	19			1			2				**30**
Monthly	17	314	98	0	34	967	0	0	27	0	0	90	0	1	159	**1707**
Total	62	1446	294	0	43	1546	0	1	57	0	0	144	0	1	226	**3821**

BERKSHIRE HATHAWAY ENERGY